Metra inženiring d.o.o.

Control Unit ELS RFID *User Manual*

Table of contents

Control Unit ELS RFID *User Manual* 2
Product description 2
User interface 3
Display Unit 3
Coin acceptor (optional) 3
Euro deposit pad (optional) 4
Operation indication 4
Indication of unoccupied locker 4
Basic operation 5
Presenting RFID media as a locker key 6
Locking procedure 7
Normal locking procedure 7
User waiting time increment 8
Locking procedure – payment required 8
Multiple locking procedure 9
Locking procedure – deposit required 10
Unlocking procedure 10
Normal unlocking procedure 10
Multiple unlocking procedure 11
Use as an information terminal 11
Use of Master card 11
Opening single locker 12
Opening all lockers: 13
Closing back the locker opened with Master card 14
Warning signalization 15
Alarm signalization 16
Locker brake-in Alarm 16
Control Unit box brake-in Alarm 16
Remote opening of single locker 16
Emergency opening of all lockers 17
Error mode of operation 17
Construction mode of operation 17
User stickers 17
Warnings for User 18
Appendix 19

Control Unit ELS RFID *User Manual*

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System: **Metra ELS – Electronic Locking Systems**

Product Group: **Control Unit ELS RFID**

Types:

- **ELCUIS** (ISO 15693, ISO14443A/B)
- **ELCUSD** (Skidata)
- **ELCULF** (LF Multitag)
- **ELCUA** (Tagsys)
- **ELCUTG** (TechnoGym)
- **ELCUMF** (Mifare, ISO14443A/B)

Year of Construction: 2003 - 2006

Declaration of Conformity: CE The Metra ELS products have been developed, designed and manufactured in accordance with the EU directive for *Electromagnetic Compatibility (2004/108/EC)*.

Control Unit ELS RFID User Manual [rev.1-140909]
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Metra inženiring d.o.o. can assume no responsibility for any errors in this manual.

• Product description

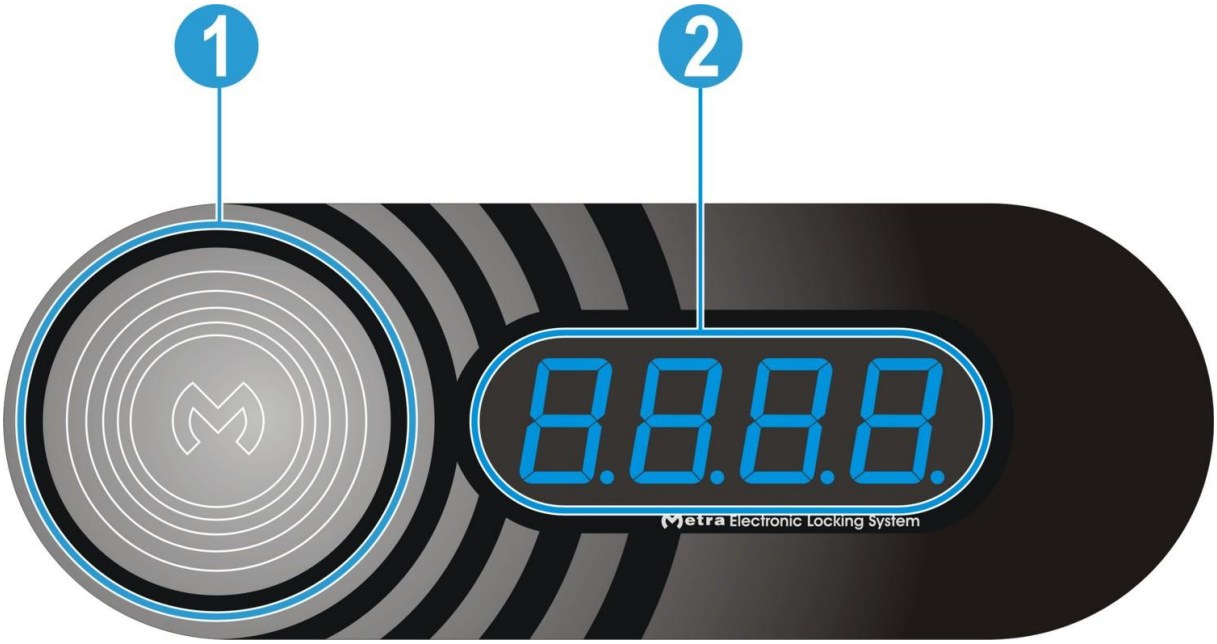
Control unit ELS RFID is used in Metra Electronic Locking System (ELS) which is primarily designed and used for locking lockers.
Control unit ELS RFID has two basic components: Control unit PCB and Display unit. Control unit PCB drives and monitors up to 16 directly connected Metra Electronic Locks (see also: Electronic Lock) and other enhancing accessories.
Display Unit (also connected to CU PCB) is the products user interface. It consists of a 4-digit LED display to show locker numbers (and other UI messages) and a contactless RFID reader. Different RFID readers are supported (see order list).

Enhancing accessories:
- Euro deposit pad limits locker misuse
- Coin acceptor generates revenue from locker use

Product can be used totally independent of Metra network. Wiring all the Control units into a network and adding a Network controller ELS enables additional alarm notification and remote unlocking of locks by pushbutton.

• User interface

• Display Unit



#	description
1	4 digit LED display with decimal points.
2	Antenna field or TechnoGym reader.

Standard models are supplied with front mask in gray colour and LED display in blue colour. For additional colours contact Metra sales.

• Coin acceptor (optional)

Control Unit ELS can be configured to ask for payment when locking the locker door. In that case Coin Acceptor is mounted near the Display Unit.

- Euro deposit pad (optional)

Euro deposit pad is mounted under the door strike. The locker can be locked only if a coin is inserted. The coin is used as a deposit while the locker is closed/locked.

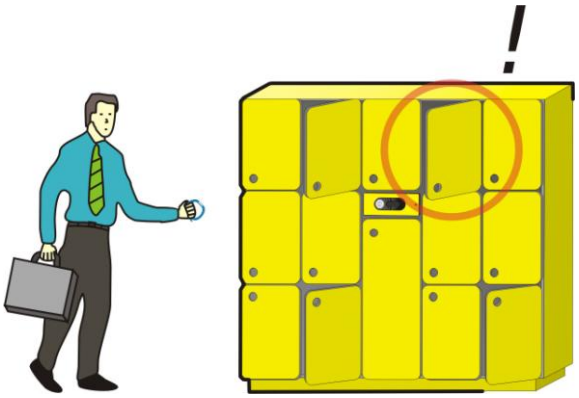
• Operation indication

When the unit is running, a blue dot on the left side of display is flashing.

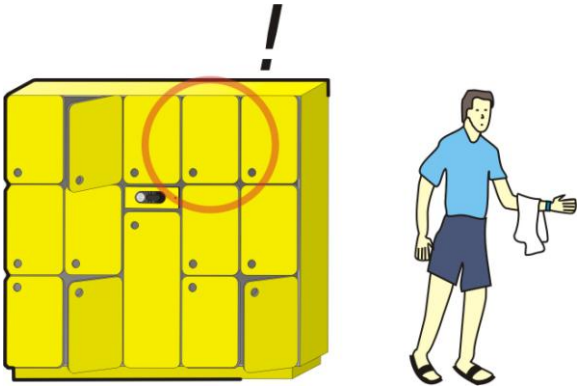
• Indication of unoccupied locker

Indication of unoccupied locker is slightly opened locker door. The Metra Electronic Lock has built-in door ejector.

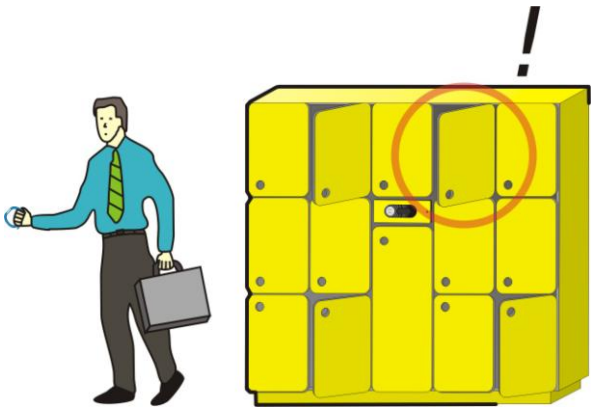
• Basic operation



User can choose any unoccupeid locker.



User locks the locker by using RFID media (card, wristband, tag…). Only one locker at the same level can be locked by the same RFID media.



By presenting RFID media again the locker unlocks and is free for another user.

• Presenting RFID media as a locker key

Approach the RFID media to the antenna field. Reading distance is 2 – 5 centimetres from the device surface. Hold it in the antenna field for a few moments for Control Unit to read and process the RFID media.

When the RFID media is recognized the following possibilities exist:

Time countdown starts (vertical lines are displayed) on Display Unit accompanied by acoustic signal.

The RFID media is accepted as a locker key and the locker can be locked.

“no” sign is displayed.

This RFID media is not accepted as a locker key! Ask at the reception desk to assign

A locker number is displayed on Display Unit and the corresponding locker is unlocked and opened. Short acoustic signal is activated.

The locker was already locked at this Control Unit by this RFID media and is now unlocked and opened.

Locker number is flashing and the interrupted beep acoustic signal is activated.

The locker was already locked at different Control Unit by this RFID media. Only one locker can be locked with the same RFID media.

Multi key:

"FrEE" sign is displayed.

This RFID media is accepted as a Multi key! There are no lockers closed with this Multi key at the moment.

Multi key:

"ALL" sign is displayed.

This RFID media is accepted as a Multi key! Control Unit enters multiple unlocking mode. See multiple unlocking procedure for more information.

• Locking procedure

• Normal locking procedure

STEP 1: Close the locker door. Time countdown starts (vertical lines are displayed) on the Display Unit and interrupted beep acoustic signal is activated.

STEP 2: Approach the RFID media to the antenna field. Reading distance is 2 – 5 centimetres from the device surface. Hold the RFID media in the field for a few moments for Control Unit to read and process it.

STEP 3: When the RFID media is accepted as a locker key the corresponding locker is locked and its number is displayed.

☝ NOTE ☝
If the locker was closed and RFID media was not presented, locker automatically opens when time countdown ends.

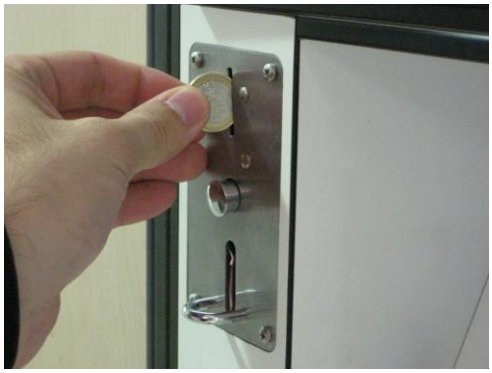
• User waiting time increment

User waiting time increments (slower countdown) after the countdown ended without presenting the RFID media to lock the locker. This gives user more time to present the RFID media in second attempt.

• Locking procedure – payment required

Steps 1 and 2 are the same as in normal locking procedure.

STEP 3: Sign ”Euro”/“Coin”/”GbP”/”PAY”/”USd” is displayed on Display unit. User is asked for payment to finalize the locking procedure.



STEP 4: Insert a coin in the coin acceptor. Coin value is displayed after the insertion.

☝ NOTE ☝
If the coin is not inserted the locker unlocks and opens after a few seconds.

STEP 5: Locker number is displayed on Display Unit and corresponding locker is locked.

• Multiple locking procedure

For multiple locking a special multi key is needed. All the lockers closed that way can be later unlocked (all at once) using the Multi key.

☝ NOTE ☝
See also Metra Software Help for more information on how to make a multi key.

Steps 1 and 2 are the same as in normal locking procedure.

STEP 3: When the RFID media is accepted as a **Multi key** the corresponding locker is locked and its number is displayed.

You can now repeat the locking procedure on multiple lockers.

- Locking procedure – deposit required

STEP 1: Insert coin in coin deposit pad.

Steps 2, 3 and 4 are the same as steps 1, 2 and 3 in normal locking procedure.

• Unlocking procedure

- Normal unlocking procedure

STEP 1: Approach the RFID media to the antenna field. Reading distance is 2 – 5 centimetres from the device surface. Hold the RFID media in the antenna field for a few moments for Control Unit to read and process it.

STEP 2: Display shows the locker number and the locker is unlocked when the RFID media is recognized as a locker key that previously locked that particular locker. Short acoustic signal is also activated.

☝ NOTE ☝
See also paragraph “Presenting RFID media as a locker key” for other possible reactions.

• Multiple unlocking procedure

Step 1 is the same as in normal unlocking procedure.

STEP 2: Display shows sign “ALL” following by locker numbers of previously locked lockers by this Multi key. Each number is displayed for 1.5 second.

Remove the Multi key form the antenna filed.

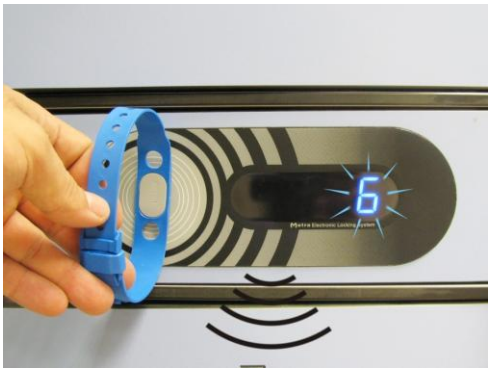
☝ NOTE ☝
See also paragraph “Presenting RFID media as a locker key” for other possible reactions.

STEP 3: To open all lockers at once present the Multi key again to the antenna field right after sign “ALL” is displayed or when desired locker number to be opened is displayed, to open just one locker. If you want to open locker one by one you can present the Multi key again when next desired locker number to be opened is displayed, etc.

When the Multi key is recognized, a short beep acoustic signal is activated and lockers are unlocked/locker is unlocked.

Remove the Multi key form the antenna filed.

• Use as an information terminal



If the RFID media is presented and recognized as a locker key on different Control Unit ELS the locker number is flashing on the display and interrupted acoustic signal is activated. Locker remains closed.

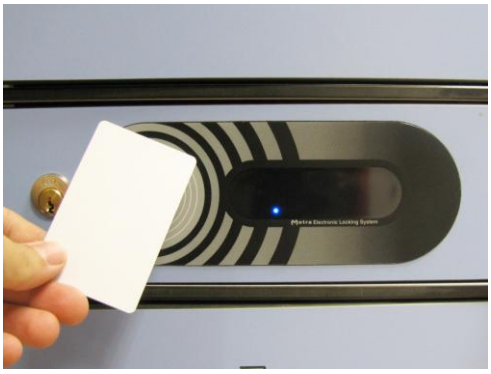
This feature can be viewed as information for user which locker was locked by her/his RFID media and where to go to open it.

• Use of Master card

Master cards are used to unlock any locker. The master card is useful when a user’s RFID media is lost or stolen.

The Master cards are defined in Metra ELS software and downloaded into Control Units as other operating parameters.

- Opening single locker



STEP 1: Approach the Master card to the antenna field. Reading distance is 3 – 5 centimetres from the device surface. Hold the Master card in the field for a few moments.

STEP 2: When the Master card is recognized three dots are displayed indicating master mode of operation was entered.

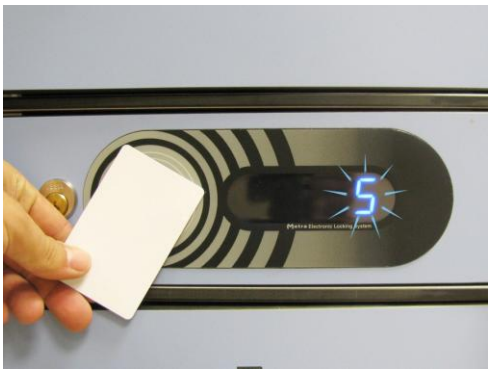
Remove the Master card form the antenna filed.

STEP 3: Display starts counting the locker numbers of the lockers connected to that Control Unit. Each number is displayed for 1.5 second.

STEP 4: When desired locker number to be opened is displayed, present the Master card again to the antenna field.

When the Master card is recognized, the locker number starts flashing.

Remove the Master card form the antenna filed.



STEP 5: While the locker number is flashing, present the Master card again to the antenna field to confirm unlocking.

When the Master card is recognized, a short beep acoustic signal is activated and locker is unlocked.

After that the Control Unit automatically exits from the Master mode.

☝ NOTE ☝
While display shows locker number the blue dot shows that the locker is occupied.

- Opening all lockers:

Steps 1 and 2 are the same as when unlocking single locker.

STEP 3: Wait until “ALL” is displayed (after locker numbers are all displayed).

STEP 4: While “All” is displayed, present the Master card to the antenna field again. When the Master card is recognized, a short beep acoustic signal is activated and “All” starts flashing.

Remove the Master card form the antenna filed.

STEP 5: While “ALL” is flashing, present the Master card again to the antenna field to confirm unlocking all the lockers connected to that Control Unit.

Remove the Master card.

STEP 6: All the lockers connected to that Control Unit start to open one after another and corresponding locker number is displayed.

• Closing back the locker opened with Master card

Sometimes it is needed to close back the locker opened with the Master card. The following rules apply:

- Only lockers previously unlocked with the Master card can be locked back with Master card.
- When locker is locked back with the Master card the user can still unlock it with her/his RFID media.

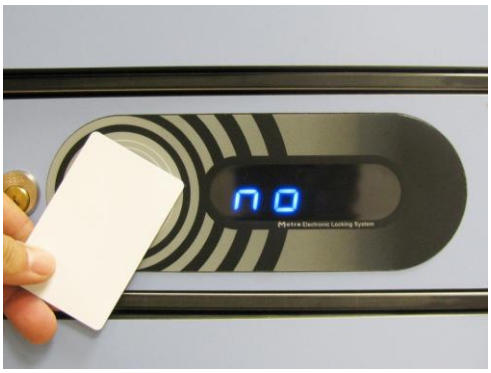
STEP 1: Close the locker. Time countdown starts (vertical lines are displayed) on Display Unit and interrupted acoustic signal is activated.

STEP 2: Approach the Master card to the antenna field. Reading distance is 2 – 5 centimetres from the device surface. Hold the card in the field for a few moments for Control Unit to read and process the card.

STEP 3: When the Master card is recognized the locker number is displayed and corresponding locker is locked.

Remove the Master card form antenna field.

☝ NOTE ☝
Locking with Master card is only possible if the locker was previously unlocked by Master card!



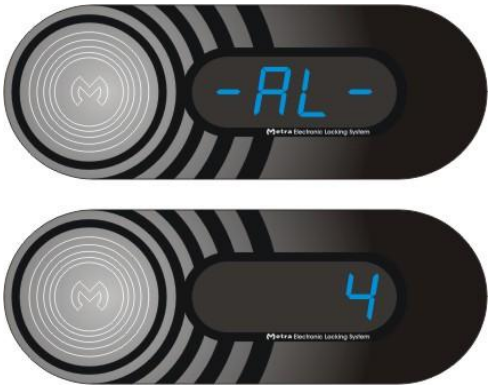
☝ NOTE ☝
If you close the locker that was not previously opened with the Master card and approach the Master card to the antenna field, “no” sign is displayed.
The locker unlocks and opens.

• Warning signalization

If locker was unlocked but not opened (door is jammed) blue dot lights up on the right side of the 4 digit LED display.

• Alarm signalization

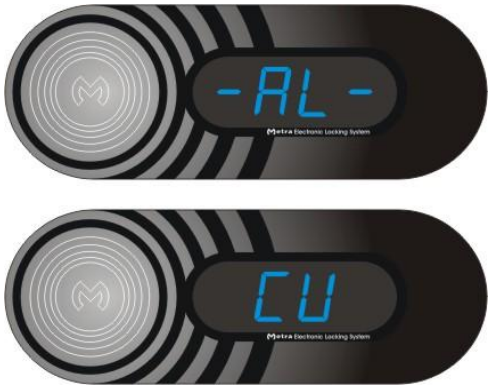
• Locker brake-in Alarm



If locker brake-in is detected the alarm notice is displayed.

The interrupted acoustic signal is turned on. Display alternately shows '-AL-' notice and the locker number.

• Control Unit box brake-in Alarm



If Control Unit box brake-in is detected, the alarm notice is displayed.

The interrupted acoustic signal is turned on. Display alternately shows '-AL-' notice and 'CU' notice.

☝ NOTE ☝
To avoid Control Unit brake-in Alarm during maintenance, the Control Unit box should be opened when the Control Unit is in Master mode of operation. In this case alarm is not activated.

• Remote opening of single locker

If remote opening of single Lockers is initiated over the network the system signals this by acoustic signal and displaying “EOPn” message followed by locker number.

• Emergency opening of all lockers

If emergency opening of all Lockers is initiated remotely by the network the system signals this by acoustic signal and displaying “EOPn” message for few seconds!

• Error mode of operation

If display shows »Err1« there is a technical problem (communication with RFID reader module).

Call maintenance.

• Construction mode of operation

“ConS” message on display means that the Control Unit is in “construction mode” of operation. It is initialized with default parameter settings as it comes out of production.

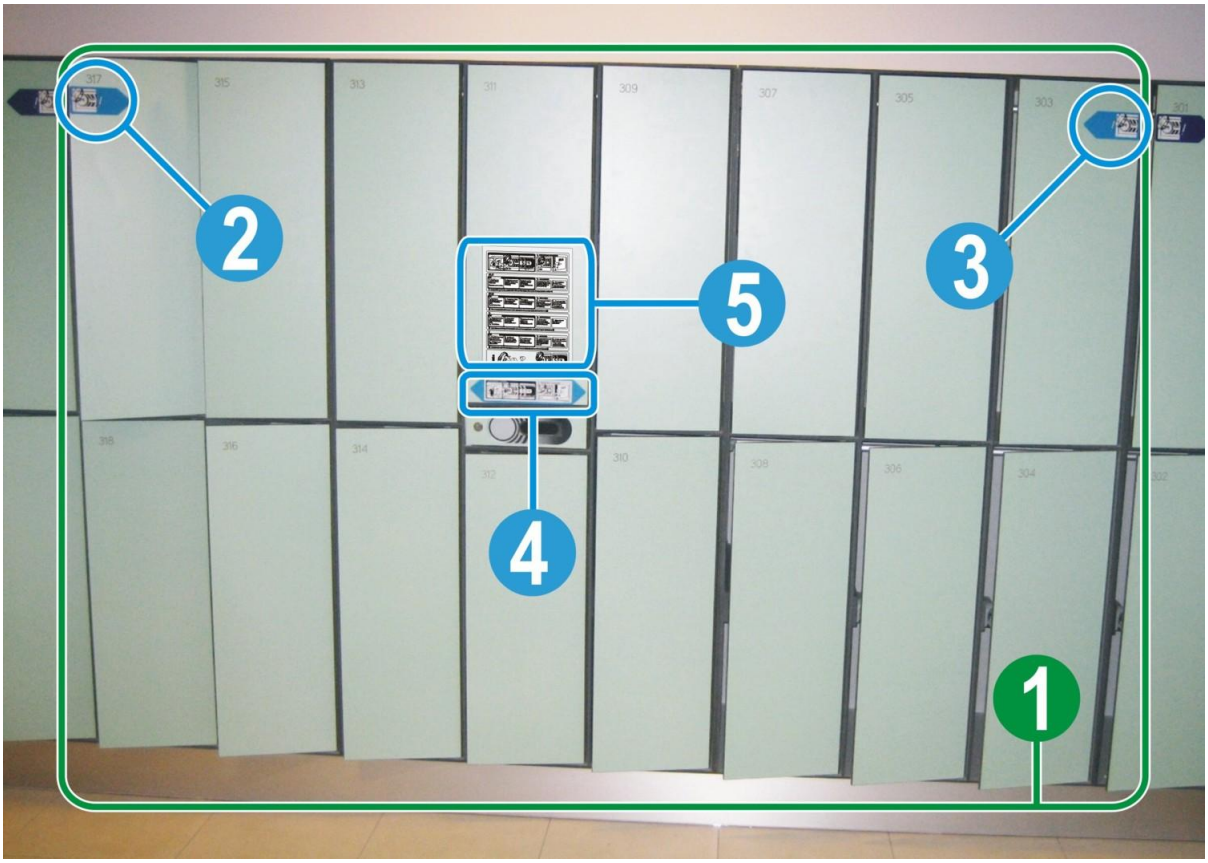
Call maintenance.

• User stickers

Main purpose of the stickers is to inform user which locks belong to which ELS Control Unit (arrow stickers and colour coding). Two adjacent banks of lockers have different colour coding of the stickers. Above the Control Unit is multilingual instruction how to lock/unlock the locker by using RFID media.

Metra Inženiring d.o.o. recommends locker manufacturers to apply short user instruction stickers on the final product with integrated Metra ELS Control Unit and Electronic locks. Example is shown bellow.

#	description
1	Bank of lockers with 16 lockers
2	Right arrow sticker
3	Left arrow sticker
4	Locking/unlocking sticker
5	User instructions sticker



• Warnings for User

Locker manufacturer should place on the final product relevant warnings (stickers) about locker usage:

Be sure the Locker is properly locked. If not sure try lock/unlock procedure again.

Use locker at your own risk.

While locking watch your fingers and clothes.

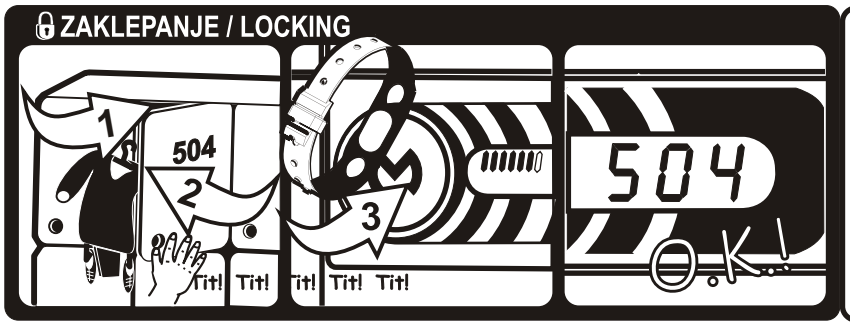
Caution: door ejects automatically when unlocking.

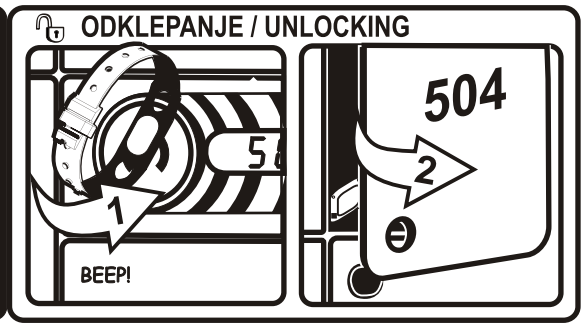
Caution! Slippery floor.

Do not spray or splash water on Locker!

• Appendix

1 User instructions sticker
2 Locking/unlocking sticker
3 Left arrow sticker
4 Right arrow sticker
5 Warning stickers





SLO

ZAKLEPANJE

1. Izberite prosto omarico in zložite stvari vanjo.

2. Zaprite vrata omarice.

3. Prislonite zapestnico na čitalnik v času, ko na kontrolni enoti utripa odštevanje.

Omarica je uspešno zaklenjena, ko je na prikazovalniku prikazana številka vaše omarice.

ODKLEPANJE

1. Prislonite zapestnico k čitalniku. Številka vaše omarice se prikaže na prikazovalniku. (i)

2. Vaša omarica se samodejno odpre.

i Vsak prikazovalnik bo prikazal vašo številko!

!!! Ko zapuščate garderobo, pustite vrata vaše omarice odprta, sicer vas bo izhodna naprava zadržala !!!

ENG

LOCKING

1. Choose any unoccupied Locker and put your belongings inside.

2. Close the Locker.

3. Present your Ticket to the antenna field while countdown flashes on the display!

The Locker is successfully locked when your Locker number is shown on the display.

UNLOCKING

1. Present your Ticket to the antenna field. The number of your Locker will be shown on the display. (i)

2. The corresponding Locker will automatically unlock and open.

i Any display will show your locker No!

!!! When leaving you should leave your Locker opened otherwise passage device will not grant you exit !!!

D

ABSCHLIEßEN

1. Wählen Sie ein freies (geöfnetes) Fach und legen Sie Ihre Sachen hinein.

2. Tür schließen.

3. Zeitbar blinkt auf dem Display. Armband ins Antennenfeld halten!

Verriegelung ist richtig erfolgt, wenn Fachnummer auf dem Display steht.

AUFSCHLIEßEN

1. Armband ins Antennenfeldhalten. Fachnummer erscheint auf dem Display. (i)

2. Entsprechendes Fach öffnet sich automatisch.

!!! Beim Verlassen der Anlage Garderobenfach offen und unverriegeld lassen, sonst keine Freigabe des Ausgangs !!!

I

CHIUSURA

1. Scegliete l`armadietto libero e posateci la vostra roba personale.

2. Chiudete la porta dell`armadietto.

3. Avviciniate il cinturino allo display mentre sta mostrando lo scadere del tempo.

L` armadietto viene chiuso dopo esser apparso il numero del Vostro armadietto.

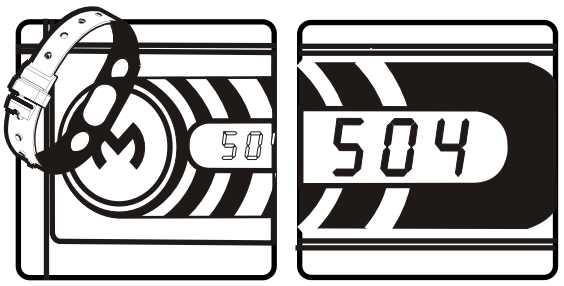
APERTURA

1. Avvicinate il cinturino allo display. Il numero del vostro armadietto viene apparso subito dopo. (i)

2. Il vostro armadietto si apre automaticamente.

i Ogni display monstrera il numero del Vostro armadietto!

!!! Lasciando gli spogliatoi lasciate aperte le porte dei vostri armadietti altimente sarete fermati all`uscita !!!



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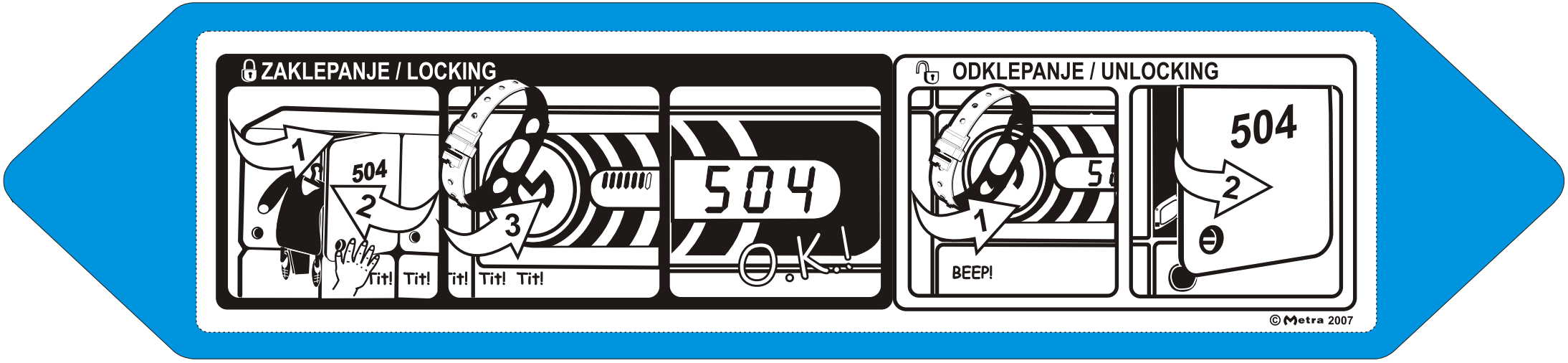
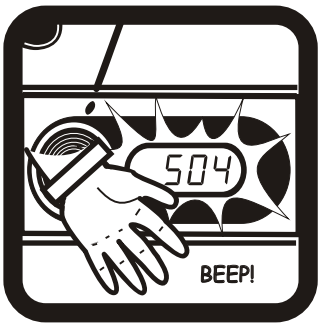

ZAKLEPANJE / LOCKING
1
504
2
Tit!
Tit!
3
Tit!
Tit!
Tit!
504
OK!
ODKLEPANJE / UNLOCKING
1
BEEP!
504
2
© Metra 2007

WARNING - WARNUNG - OPOZORILO



ENG: Be sure the Locker is properly locked. If not sure try lock/unlock procedure again.
GER: Vergewissern Sie sich, daß Ihr Garderobenfach richtig verriegelt ist. Sind Sie nicht sicher, wiederholen Sie zuerst das Entriegeln und danach das Verriegeln.
SLO: Prepričajte se, če je omarica pravilno zaklenjena. V primeru dvoma ponovite postopek (odklep/zaklep).

ENG: Use of Locker at your own risk.
GER: Benutzung der Garderobenfächer auf eigene Verantwortung. Keine Haftung für Wertsachen.
SLO: Uporaba omarice na lastno odgovornost.

ENG: While locking watch your fingers and clothes.
GER: Beim Schließen der Fächer auf Finger und Kleidung achten.
SLO: Bodite pozorni na prste in garderobo pri zapiranju omarice.

ENG: Caution: door ejects automatically when unlocking.
GER: Achtung! Die Tür öffnet sich beim Entriegeln Automatisch.
SLO: Pazite na avtomatski izmet vrat pri odpiranju omarice.

ENG: Caution! Slippery floor.
GER: Achtung! Glatter Boden.
SLO: Pozor! Spolzka tla.

ENG: Do not spray or splash water on Locker!
GER: Es ist strengstens verboten das Gepäckschließfach mit Wasser zu bespülen.
SLO: Ne polivaj omarice z vodo!

Metra inženiring d.o.o.